

CLAIMS

1. An audio and/or video generation apparatus which is arranged in operation to generate audio and/or video signals, said audio and/or video generation apparatus, comprising

5 - a recording means which is arranged in operation to record said audio and/or video signals on a recording medium,

- a meta data generation processor which is arranged in operation to generate meta data identifying the content of said audio/video signals in response to said audio/video signals, and

10 - a communications processor which is operable to communicate said meta data separately from said recording medium.

2. An audio and/or generation apparatus as claimed in Claim 1, wherein said meta data generation processor is operable to receive a pre-defined list of takes of
15 audio/video signals to be generated, said meta data generation processor being arranged in operation to generate said meta data in association with said list of takes, and said communications processor is arranged to communicate said meta data in association with said list of takes.

20 3. An audio and/or generation apparatus as claimed in Claims 1 or 2, wherein said meta data generated by said meta data generation processor is at least one picture which is representative of an image from said recorded video signals.

4. An audio and/or generation apparatus as claimed in Claim 3, wherein said meta
25 data processor is arranged in operation to associate said picture with an address on said recording medium at which said image is recorded, said address forming part of said meta data communicated by said communications processor.

5. An audio and/or video generation apparatus as claimed in Claim 4, wherein
30 said meta data are the in and out points of a take of the audio/video signals.

6. An audio and/or video generation apparatus as claimed in any of Claims 1 to 5, wherein said meta data includes a unique identification code for identifying the audio/video signals.

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7. An audio and/or video generation apparatus as claimed in Claim 6, wherein the unique identification code includes a UMID or the like.

8. A receiving apparatus for receiving and displaying the meta data communicated
10 by the audio and/or video generation apparatus claimed in any of Claims 1 to 7.

9. A meta data generation apparatus comprising
- a meta data generation processor which is arranged in operation to receive audio and/or video signals, and to generate meta data identifying the content of said
15 audio/video signals in response to said audio/video signals, and
- a communications processor which arranged to communicate said meta data separately from said recording medium.

10. A meta data generation apparatus as claimed in Claim 9, comprising
20 - a data store, wherein said meta data generation processor is arranged to receive a pre-defined list of takes of audio and/or video signals to be generated and stored in said data store, said meta data generation processor being arranged in operation to generate said meta data in association with said list of takes, and said communications processor is operable to communicate said meta data in association
25 with said list of takes.

11. A meta data generation apparatus as claimed in Claims 9 or 10, wherein said meta data generated by said meta data generation processor includes at least one picture which is representative of an image from said recorded video signals.

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12. A meta data generation apparatus as claimed in Claim 11, wherein said picture is arranged in operation to be associated with an address on said recording medium at which said image is recorded, said address forming part of said meta data communicated by said communications processor.

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13. A method of generating audio and/or video signals representative of an audio and/or visual source, said method comprising the steps of

- recording said audio and/or video signals on a recording medium,
- generating meta data identifying the content of said audio/video signals in response to said audio/video signals, and
- communicating said meta data separately from said recording medium.

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14. A storage medium on which information signals are recorded, said information signals being representative of the meta data generated by the generation apparatus according to any of Claims 1 to 7 and Claims 9 to 12.

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15. A signal representing the meta data communicated by the generation apparatus according to any of Claims 1 to 7 and 9 to 12.

20 16. A video generation apparatus which is arranged in operation to generate video signals representative of an image source, said video generation apparatus comprising

- a recording processor which is arranged in operation to record said video signals on a recording medium, and

- a meta data generation processor which is arranged in operation to receive said video signals and to generate at least one sample image which is representative of a video image from said recorded video signals, and to associate said sample image with an address on said recording medium at which said video image is recorded.

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17. An video generation apparatus as claimed in Claim 16, wherein said at least one sample image is first and second sample images, said first of said sample images being generated for a video image at an in point of said at least part of said video

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signals and said second of said sample images being generated for a video image at an out point of said at least part of said video signals, and said address is a first and second address, said first address indicating the place on said recording medium at which said in point video image is recorded, and said second address indicating the place on said recording medium at which said out point video image is recorded.

18. A video generation apparatus as claimed in any of Claims 16 or 17, comprising
- an activity detector coupled to said meta data generation processor and arranged in operation to receive said video signals and to generate an activity signal indicative of a relative change of content of said video signals, wherein

- said meta data generation processor is arranged in operation to generate a plurality sample images, each of which is representative of a video image from said recorded video signals, said sample images being generated at times of change of content of said video signals indicated by said activity signal, an address of each of said sample images providing the location on said recording medium at which the corresponding video image is recorded.

19. A video generation apparatus as claimed in Claim 18, wherein said activity detector generates said activity signal by forming a histogram of colour components of said video image and determining a rate of change of said colour components.

20. A video generation apparatus as claimed in Claims 18 or 19, wherein said activity detector generates said activity signal by from motion vectors of image components of said video image signal.

21. A video generation apparatus as claimed in any of Claim 18 to 20,
- a display processor which is arranged in operation to provide a visible representation of said sample images.

22. A video generation apparatus as claimed in any of Claims 16 to 21, wherein said video signals are representative of a plurality of video material items, and said

meta data generation processor is arranged in operation to generate a preference marker in response to commands from a user in association with selected ones of said video material items.

5 23. A video generation apparatus as claimed in Claim 22, wherein said meta data generation processor is arranged in operation to record data representative of said preference marker on said recording medium.

10 24. A video generation apparatus as claimed in any of Claims 16 to 23, comprising
- a data store coupled to said meta data generation processor, said at least one sample image and said address being stored in said data store separately from said recording medium.

15 25. A video generation apparatus as claimed in Claim 24, wherein said data representing said preference marker is stored in said data store in association with the sample image and the address corresponding to a selected video material item.

20 26. A video generation apparatus as claimed in any of Claim 16 to 25, wherein said recording medium is a random access memory, and said address indicates a place in said memory where said video image is recorded.

25 27. A video generation apparatus as claimed in any of Claims 16 to 26, wherein said recording medium is a linear recording medium and said address is a time code corresponding to a place on said recording medium where said video image is recorded.

30 28. A video generation apparatus as claimed in any of Claims 16 to 27, wherein said meta data processor generates said sample images in accordance with a compression encoding process such as the Joint Photographic Experts Group compression encoding process.

29. A video generation apparatus as claimed in any of Claims 16 to 28, wherein said meta data includes a unique identification code for identifying the video signals.

30. A video generation apparatus as claimed in Claim 29, wherein the unique
5 identification code is a UMID or the like.

31. A meta data generation processor comprising

- a sample image generation processor which is arranged in operation to receive video signals being recorded on to a recording medium, and to generate at least one
10 sample image which is representative of a video image from the video signals being recorded, and

- an address detector which is arranged in operation to associate the sample image with an address on the recording medium at which the video image is recorded.

32. A meta data generation processor as claimed in Claim 31, wherein said at least one sample image is first and second sample images, said first of said sample images being generated for a video image at an in point of said at least part of said video signals and said second of said sample images being generated for a video image at an out point of said at least part of said video signals, and said address is a first and
15 second address, said first address indicating the place on said recording medium at which said in point video image is recorded, and said second address indicating the place on said recording medium at which said out point video image is recorded.
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33. A meta data generation processor as claimed in Claim 31 or 32, comprising

25 - an activity detector arranged in operation to receive said video signals and to generate an activity signal indicative of a relative change of content of said video signals, wherein

- said sample image generation processor is arranged in operation to generate a plurality sample images, each of which is representative of a video image from said
30 recorded video signals, said sample images being generated at times of change of content of said video signals indicated by said activity signal, an address of each of

said sample images providing the location on said recording medium at which the corresponding video image is recorded.

34. A meta data generation processor as claimed in Claim 33, wherein said activity
5 detector generates said activity signal by forming a histogram of colour components of said video image and determining a rate of change of said colour components.

35. A meta data generation processor as claimed in Claims 33 or 34, wherein said
10 activity detector generates said activity signal by from motion vectors of image components of said video image signal.

36. A meta data generation processor as claimed in any of Claims 31 to 35,
comprising
- a sample image generation processor which is arranged in operation to receive
15 video signals and to generate at least one sample image which is representative of a video image from the video signals, and
- an address detector which is arranged in operation to associate the sample image with an address of the video image in the video signals.

20 37. A method of generating video signals representative of an image source, said method comprising the steps of
- forming said video signals,
- recording said video signals on a recording medium,
- generating at least one sample image which is representative of a video image
25 from said recorded video signals, and
- associating said sample image with an address on said recording medium at which said video image is recorded.

38. A method of generating video signals as claimed in Claim 37, wherein the step
30 of generating at least one sample image comprises the step of

- generating first and second sample images, said first of said sample images being generated for a video image at an in point of said at least part of said video signals and said second of said sample images being generated for a video image at an out point of said at least part of said video signals, and the step of associating said at least one sample image with an address comprises the step of

- generating a first and second address, said first address indicating the place on said recording medium at which said in point video image is recorded, and said second address indicating the place on said recording medium at which said out point video image is recorded.

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39. A method of generating video signals as claimed in Claim 38, wherein the step of generating at least one sample image comprises the step of

- generating an activity signal indicative of a relative change of content of said video signals, and

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- generating a plurality sample images, each of which is representative of a video image from said recorded video signals, said sample images being generated at times of change of content of said video signals indicated by said activity signal, and the step of associating said at least one sample image with an address comprises the step of

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- providing the location of each of said plurality of sample images on said recording medium at which the corresponding video image is recorded.

40. A recording medium on which is stored data representative of the sample image and the address of the video signals representative of the sample image on the recording medium generated by the video generation apparatus according to any of Claims 16 to 30, or the meta data generation processor according to any of Claims 31 to 36.

41. A signal representing the sample image and the address of the video signals corresponding to said sample image which are generated by the video generation

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apparatus according to any of Claims 16 to 30, or the meta data generation processor according to any of Claims 31 to 36.

42. A system for generating an audio and/or video production comprising

5 - an acquisition processor operable in use to receive instructions from a user which instructions are representative of a list content items for the audio and/or video production,

- an audio and /or video generation apparatus arranged in operation to receive information representative of list of said content items, and operable in use to generate
10 audio and/or video signals in accordance with said content items of said list, and

- an ingestion processor which is arranged in operation to receive said list of content items, and said audio and/or video signals and to form said audio and/or video production by associating said audio and/ or video signals with said list of content items.

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43. A system as claimed in Claim 42, wherein said audio and/or video signals are representative of a plurality of takes captured by said generation apparatus in association with said content items, and said ingestion processor is arranged to form said audio and/or video production by selecting for at least one content item at least
20 one of a plurality of takes associated with said at least one content item.

44. A system as claimed in Claims 42 or 43, wherein said audio and/or video generation apparatus is provided with a meta data generation tool which is arranged in operation to generate meta data describing said audio and/or video signals in
25 combination with said content item list.

45. A system as claimed in Claims 42, 43 or 44, wherein said meta data generator generation tool is arranged to indicate a preferred one of said plurality of takes to be used for said at least one content item, and said ingestion processor is arranged to
30 select said preferred take for said at least one content item consequent upon said indication.

46. A system as claimed in Claim 45, wherein said indication is a good shot marker or the like.

5 47. An acquisition processor for use in generating an audio/video production, comprising

- a control processor coupled to a data store,
- a user interface coupled to the control processor for receiving commands from a user, and

10 - a communications interface coupled to the control processor and arranged in operation to receive data representative of pre-planned audio/video material items, wherein said control processor is arranged in use to communicate data indicative of at least one of said pre-planned audio/video material items to be generated by an audio/video generation apparatus.

15 48. An acquisition processor as claimed in Claim 47, wherein said pre-planned audio/video material items are representative of a plurality of takes of audio/video material items to be acquired by said audio/video generation apparatus.

20 49. An acquisition processor as claimed in Claim 47 or 48, wherein said communications interface is arranged to receive signals representative of meta data identifying at least one audio/video material item recorded onto a recording medium corresponding to said at least one of said pre-planned audio/video material items.

25 50. An acquisition processor as claimed in Claim 49, wherein said control processor operates to store said meta data identifying said at least one recorded audio/video material item in said data store in association with the corresponding pre-planned audio/video material item.

30 51. An acquisition processor as claimed in any of Claims 47 to 50, wherein said user interface is arranged to receive a command indicative of a preferred one of a

plurality of audio/video material items to be used for one of said pre-planned audio/video material items, and said control processor is arranged in operation to store said indication in said data store in association with said selected audio/video material item.

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52. An acquisition processor as claimed in Claim 51, wherein said indication is a good shot marker or the like.

53. An audio and/or video generation apparatus for generating audio and/or video signals, said audio and/or video generation apparatus comprising

10 - a recording means which is arranged in operation to record said audio and/or video signals on a recording medium,

- a communications interface arranged in operation to receive data indicative of at least one of a plurality of pre-planned audio/video material items, and

15 - a meta data generation processor coupled to said communications interface and to said recording means and arranged in operation to generate meta data identifying at least one audio/video material item recorded on to said recording medium corresponding to said at least one pre-planned audio/video material item.

20 54. An audio and/or video generation apparatus as claimed in Claim 53, wherein said meta data generation processor is arranged to operate in combination with said communications interface to communicate said meta data to an acquisition processor.

25 55. An audio and/or video generation apparatus as claimed in any of Claims 53 or 54, comprising

- a user interface coupled to said meta data generation processor and arranged in use to receive a command indicative of a preferred one of a plurality of audio/video material items to be used for one of said pre-planned audio/video material items, and said meta data generation processor is arranged in operation include in said meta data
30 identifying said preferred one of said audio/video material items data representing said preferred indication.

56. An audio and/or video generation apparatus as claimed in Claim 55, wherein said preferred indication includes a good shot marker or the like.

5 57. A computer program providing computer executable instructions, which when loaded on to a data processor configures said data processor to operate as an audio and/or video generation apparatus as claimed in Claims 1 to 7, or a meta data generation apparatus as claimed in any of Claims 9 to 12, or a video generation apparatus as claimed in Claims 16 to 30, or a meta data generation processor as
10 claimed in Claims 31 to 36, or a system for generating an audio and/or video production as claimed in Claims 42 to 46, or acquisition processor as claimed in any of Claims 47 to 52, or an audio and/or video generation apparatus as claimed in any of Claims 53 to 56.

15 58. A computer program having computer executable instructions, which when loaded on to a data processor causes the processor to operate in accordance with the method according to any of Claims 13, 37 to 39.

20 59. A computer program product having a computer readable medium having recorded thereon information signals representative of the computer program Claimed in any of Claims 57 or 58.

25 60. A system for generating an audio and/or video production as herein before described with reference to the accompanying drawings.

61. An acquisition processor as herein before described with reference to the accompanying drawings.

30 62. An audio and/or video generation apparatus as herein before described with reference to the accompanying drawings.

63. A method of generating audio and/or video signals as herein before described with reference to the accompanying drawings.

64. A video generation apparatus as herein before described with reference to the
5 accompanying drawings.

65. A method of recording video signals as herein before described with reference to the accompanying drawings.